B5 canceled

detected specific signal.

20. (AS UNAMENDED) A flat plasma display as claimed in claim 19, wherein said three-electrode surface discharge AC plasma display further comprises:

first and second electrodes arranged in parallel with each other; and

third electrodes orthogonal to said first and second electrodes, said first electrodes being commonly connected together and said second electrodes being arranged to define respective display lines, wherein said flat plasma display has a surface discharge structure employing wall charges as a memory.

21. (AS UNAMENDED) A flat plasma display as claimed in claim 20, wherein said three-electrode surface discharge AC plasma display further comprises:

a first substrate, said first and second electrodes being arranged in parallel to each other on said first substrate and paired for defining respective display lines;

a second substrate spaced apart from and facing said first substrate, defining a cavity therebetween, said third electrodes being arranged on said second substrate in orthogonal relationship to said first and second electrodes and displaced therefrom;

wall charge accumulating dielectric layers respectively covering the surfaces of said first and second electrodes;

a phosphor formed over said second substrate;

a discharge gas sealed in the cavity between said first and second substrates; and

cells formed at intersections where said first and second electrodes cross said third electrodes.

Please ADD the following claim:

B6

22. (NEW) A flat plasma display as claimed in claim 9, wherein said other drive voltages include said second high voltage.

REMARKS

In accordance with the foregoing, various of the pending claims have been amended to more clearly set forth features of the present invention and a new dependent claims 22/9 has been added. (Claims 15-21 are treated as pending herein, and thus each thereof which is

amended herein is designated as "(ONCE AMENDED)".

No new matter is presented in any of the amendments to the pending claims 1-21 or the new claim 22 and, accordingly, approval and entry of the amended and new claims are respectfully requested.

PENDING CLAIMS 1-21

The Action identifies claims 1-14 as pending herein.

Applicants note that a Preliminary Amendment was filed herein on September 20, 2002--one day after the mailing date of the Office Action on September 19, 2002. That Preliminary Amendment presented new claims 15-21 which, it follows, were not pending in the application at the time the current Office Action was issued.

ITEMS 2 and 3: REJECTIONS/OBJECTIONS AS TO INADEQUATE DISCLOSURE

Item 2 of the Action rejects claims 1-8 for lack of a written description in the specification under 35 USC § 112, ¶1; particularly, in item 2, the Examiner cites each operating "unit" of the five paragraphs of the body of independent claim 1 as lacking a written description.

Item 3 of the Action, furthermore, objects to the drawings as failing to illustrate the elements recited in claim 1, as identified in item 2 of the Action--and, absent which, the Action asserts that the elements must be canceled from the claims.

TRAVERSE OF THE §112, ¶ 1 REJECTION OF ITEM 2 AND OF THE OBJECTION TO THE DRAWINGS OF ITEM 3

The five paragraphs of the body of claim 1 reciting respective "unit(s)" appear in paragraph [0013] of the Summary of the Invention. Hence the §112, ¶ 1 rejection is respectfully traversed and should be withdrawn.

Furthermore, the functions of the four "voltage decision" units of claim 1 correspond to the functions of CPU 40 (Fig. 6A) and are shown in the flow chart of Fig. 12—VIZ.:, step S2 as to high voltage VA (paragraph [0080]) and step S5 as to voltages VA, VW and VE (paragraph

[0083]). Therein, the step S2 "checks the high voltage VS" and the step S5 "checks the internal power supply to see whether or not the output voltages...of circuit 50 meet values stored in the CPU 40."

Moreover, the features of the decision unit and time compensation unit can readily be understood by a person skilled in the art by referring to the present specification and drawings. Specifically, as shown in Fig. 6A, a high voltage VS, a voltage VA for an address discharge pulse, a voltage VW for a write discharge pulse, and a voltage VE for an erase pulse are detected by high-voltage detectors 61 to 64, and detection signals VSK, VAK, VWK, and VEK output from the high-voltage detectors 61 to 64 are supplied to an 8-bit A/D converter incorporated in the CPU 40. Further, the converted detection signals (VSK, VAK, VWK and VEK -- are processed or decided (whether the signals VSK, VAK, VWK and VEK -- i.e., voltages VS, VA, VW and VE) are kept at specific values or within specific ranges) in the CPU 40 by a software operation and, in accordance with which, power supply control signals PWSC1, PWSC2 and drive control signals MCRST, MCPSD and ADENA are output from the CPU 40.

Accordingly, it is respectfully submitted that the § 112 ¶ 1 rejection and the objection are without basis and should be withdrawn.

ITEMS 5 AND 6: REJECTIONS ON THE PRIOR ART

Item 5 rejects claims 1-5 and 9-14 for obviousness under 35 USC § 103(a) over Lower (USP 4,855,892) in view of Shimamoto et al. (USP 5,300,874), both newly cited references.

Item 6 of the Action rejects claims 6-8 likewise for obviousness (§103) over that same combination of Lower and Shimamoto et al. Although not set forth in the opening paragraph of item 6, Kanazawa, of record, further is relied upon for disclosing a plasma display panel of the claim limitations--in view of the Examiner's concession that neither of the primary cited references discloses a plasma display, as claimed.

The prior art rejections are respectfully traversed.

In the statement of reliance on Lower in support of the rejection of claim 1 in item 5, and as the Examiner concedes in the Action at page 4, line 11, Lower fails to disclose voltage decision units. Further, Shimamoto does not teach or suggest the special characteristics of the present invention as claimed in claim 1. Specifically, in claim 1, the flat plasma display has first

and second high voltage decision units, first and second drive voltage decision units and a drive control signal control unit, and the drive control signal control unit controls drive control signals of the flat plasma display in response to the decided results of the first and second high voltage decision units and the first and second drive voltage decision units.

Further, in the present invention as recited in claims 9 and 11, an internal power supply circuit receives a first high voltage and generates a second high voltage (i.e., another high voltage) different from the first high voltage, and an internal power supply controlling unit controls an operation of the internal power supply circuit, in response to the "detected first high voltage and other drive voltages" (claim 9) and in response to "the compared result of said detected first high voltage" (claim 11).

Further, in the present invention as recited in claim 13, an internal power supply circuit generates "a plurality of drive voltages", and an internal power supply controlling unit produces "power supply control signals" and stops "an operation of the internal power supply circuit by changing the power supply control signals, in response to "...[a]...detected specific signal."

Further, in the present invention as recited in claim 14, an internal power supply circuit "generates a plurality of drive voltages", and an internal power supply stopping unit controls "an operation of the internal power supply circuit by changing power supply control signals, in response to the result of checking display data."

These special characteristics of the present invention, as respectively defined in claims 9, 11, 13, and 14, are not taught or suggested in Lower or Shimamoto, taken singly or in any proper combination.

In addition, as clarified in the above, once amended claims 15 and 19 which were not examined in this Office Action, in the present invention, as recited in claim 15, an internal power supply circuit generates "a plurality of drive voltages", and an internal power supply controlling unit produces "power supply control signals controlling an operation of the internal power supply circuit"; and further, in the present invention as recited in claim 19, a drive control signal control unit controls "drive control signals of...a...flat plasma display" to control a plurality of drive voltages of the flat plasma display "in response to a detected specific signal."

These special characteristics of the present invention, as defined by claims 15 and 19, are not taught or suggested in Lower or Shimamoto, whether taken singly or in any proper combination.

With regard to Kanazawa, Kanazawa only discloses a three-electrode surface discharge AC plasma display, and does not teach or suggest the special characteristics of the present invention as defined by any of the independent claims 1, 9, 11, 13, 14, 15, and 19 and which are allowable thereover, along with their respective dependent claims.

CONCLUSION

In accordance with the foregoing, it is respectfully submitted that the claims pending herein patentably distinguish over the art of record, taken singly or in any proper combination, and that the application is in condition for allowance, which action is earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Feb. 19, 2003

By: _____

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CERTIFICATE UNDER 37 CFR 1.8(a)

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on February 19 ,20 03

STAAS & HALSEY

By: Bridget Christian

Date: February 19, 2003

IN THE CLAIMS:

Please AMEND the following claims:

1. (AS UNAMENDED) A flat plasma display for displaying data in accordance with a high voltage and drive voltages produced from said high voltage, wherein said flat plasma display comprises:

a first high voltage decision unit determining whether or not said high voltage is at a specific value or within a specific range after a power supply is turned on and initialization is carried out;

a first drive voltage decision unit determining whether or not said drive voltages are at specific values or within specific ranges;

a second high voltage decision unit determining whether or not said high voltage is kept at the specific value or within the specific range after the start of a protective operation of an internal power supply circuit that generates said drive voltages;

a second drive voltage decision unit determining whether or not said drive voltages are kept at the specific values or within the specific ranges; and

a drive control signal control unit controlling drive control signals of said flat plasma display in response to the decided results of said first and second high voltage decision units and said first and second drive voltage decision units.

2. (AS UNAMENDED) A flat plasma display as claimed in claim 1, wherein the control of said internal power supply circuit is carried out together with the control of said drive control signals in response to the decided results of said second drive voltage decision unit.

3. (AS UNAMENDED) A flat plasma display as claimed in claim 1, wherein said flat plasma display is initialized when said second high voltage decision unit determines that said high voltage is not kept at the specific value or the specific range, and an internal power of said internal power supply circuit and said drive voltages are cut OFF when said second drive voltage decision unit determines that said drive voltages are not kept at the specific values or within the specific ranges.

4. (AS UNAMENDED) A flat plasma display as claimed in claim 1, wherein said flat

plasma display further comprises a time compensation unit for compensating for the time between the instant that said high voltage is applied until said drive voltages reach the specific values.

5. (AS UNAMENDED) A flat plasma display as claimed in claim 1, wherein said specific value compared with said high voltage in said first high voltage decision unit differs from said specific value compared with said high voltage in said second high voltage decision unit.

6. (AS UNAMENDED) A flat plasma display as claimed in claim 1, wherein said flat plasma display comprises a three-electrode surface discharge AC plasma display.

7. (AS UNAMENDED) A flat plasma display as claimed in claim 6, wherein said three-electrode surface discharge AC plasma display further comprises:

first and second electrodes arranged in parallel with each other; and

third electrodes orthogonal to said first and second electrodes, said first electrodes being commonly connected together and said second electrodes being arranged to define respective display lines, wherein said display has a surface discharge structure employing wall charges as a memory.

8. (AS UNAMENDED) A flat plasma display as claimed in claim 7, wherein said three-electrode surface discharge AC plasma display further comprises:

a first substrate, said first and second electrodes being arranged in parallel to each other on said first substrate and paired for defining respective display lines;

a second substrate spaced apart from and facing said first substrate, defining a cavity therebetween, said third electrodes being arranged on said second substrate in orthogonal relationship to said first and second electrodes and displaced therefrom;

wall charge accumulating dielectric layers respectively covering the surfaces of said first and second electrodes;

a phosphor formed over said second substrate;

a discharge gas sealed in the cavity between said first and second substrates; and

cells formed at intersections where said first and second electrodes cross said third electrodes.

9. (ONCE AMENDED) A flat plasma display employing [at least one] a first high voltage for supplying a sustain pulse, [said flat plasma display] comprising:

a voltage detection unit detecting said first high voltage and other drive voltages which are produced by said first high voltage;

an internal power supply circuit receiving said first high voltage and generating a second high voltage different from said first high voltage; and

an internal power supply controlling unit producing power supply control signals controlling an operation of said internal power supply circuit in response to said detected first high voltage and other drive voltages.

10. (AS UNAMENDED) A flat plasma display as claimed in claim 9, wherein said internal power supply controlling unit stops the operation of said internal power supply circuit by changing said power supply control signals in response to said detected first high voltage and other drive voltages.

11. (ONCE AMENDED) A flat plasma display employing [at least one] a first high voltage for supplying a sustain pulse, comprising:

a voltage detection unit detecting said first high voltage;

an internal power supply circuit receiving said first high voltage and generating another high voltage different from said first high voltage; and

an internal power supply controlling unit storing first and second specific values and selectively comparing the stored first and second specific values with said detected first high voltage, said first specific value being used when said first high voltage is rising and said second specific value being used when said first high voltage is falling, and controlling an operation of [an] the internal power supply circuit in response to the compared result of said detected first high voltage.

12. (AS UNAMENDED) A flat plasma display as claimed in claim 11, wherein said internal power supply controlling unit starts a circuit operation through a control circuit if said detected first high voltage reaches said first specific value, and stops the circuit operation through said control circuit if said detected first high voltage is below said second specific value.

13. (ONCE AMENDED) A flat plasma display, comprising:

a signal detection unit detecting a specific signal input from an external source;

an internal power supply circuit generating a plurality of drive voltages; and

an internal power supply controlling unit producing power supply control signals and stopping an operation of the internal power supply circuit by changing the power supply control signals, in response to said detected specific signal.

14. (ONCE AMENDED) A flat plasma display, comprising:

a display data checking unit checking display data input to said flat plasma display from an external source;

an internal power supply circuit generating a plurality of drive voltages; and

an internal power supply stopping unit controlling an operation of the internal power supply circuit by changing power supply control signals, in response to the result of checking said display data.

15. (ONCE AMENDED) A flat plasma display, comprising:

an internal power supply circuit generating a plurality of drive voltages;

an internal power supply controlling unit producing power supply control signals controlling an operation of said internal power supply circuit;

an external signal detection unit detecting a specific signal input to said plasma display from an external source; and

a drive control signal control unit controlling drive control signals of said plasma display in response to said detected specific signal.

16. (AS UNAMENDED) A flat plasma display as claimed in claim 15, wherein said internal power supply controlling unit controls an operation of said internal power supply circuit by changing said power supply control signals in response to said detected specific signal.

17. (AS UNAMENDED) A flat plasma display as claimed in claim 15, wherein said drive control signal control unit controls an operation of a display panel driving unit by changing said drive control signals in response to said detected specific signal.

18. (AS UNAMENDED) A flat plasma display as claimed in claim 15, wherein said

control signal control unit and said internal power supply controlling unit stop operating if said specific signal is at a first level and start operating if said detected specific signal is at a second level, and thereby the drive control signals are controlled in response to a level of said detected specific signal.

19. (ONCE AMENDED) A flat plasma display comprising a three-electrode surface discharge AC plasma display, [further] comprising:

an external signal detection unit detecting a specific signal input to said flat plasma display from an external source; and

a drive control signal control unit controlling drive control signals of said flat plasma display to control a plurality of drive voltages of said flat plasma display in response to said detected specific signal.

20. (AS UNAMENDED) A flat plasma display as claimed in claim 19, wherein said three-electrode surface discharge AC plasma display further comprises:

first and second electrodes arranged in parallel with each other; and

third electrodes orthogonal to said first and second electrodes, said first electrodes being commonly connected together and said second electrodes being arranged to define respective display lines, wherein said flat plasma display has a surface discharge structure employing wall charges as a memory.

21. (AS UNAMENDED) A flat plasma display as claimed in claim 20, wherein said three-electrode surface discharge AC plasma display further comprises:

a first substrate, said first and second electrodes being arranged in parallel to each other on said first substrate and paired for defining respective display lines;

a second substrate spaced apart from and facing said first substrate, defining a cavity therebetween, said third electrodes being arranged on said second substrate in orthogonal relationship to said first and second electrodes and displaced therefrom;

wall charge accumulating dielectric layers respectively covering the surfaces of said first and second electrodes;

a phosphor formed over said second substrate;

a discharge gas sealed in the cavity between said first and second substrates; and

cells formed at intersections where said first and second electrodes cross said third

electrodes.

Please ADD the following claim:

22. (NEW) A flat plasma display as claimed in claim 9, wherein said other drive voltages include said second high voltage.